Prognostic Factors for Pulmonary Embolism

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Mots-clés	echocardiography [17], natriuretic peptides [18], Prognosis [19], pulmonary embolism [20]
Résumé en anglais	Rationale: The short-term prognosis of pulmonary embolism (PE) depends on hemodynamic status and underlying disease. The prognostic value of right ventricular dysfunction and injury is less well established.Objectives: To evaluate prognostic factors of PE in a multicenter prospective cohort study.Methods: Echocardiography, brain natriuretic peptide (BNP), N-terminal–proBNP and cardiac troponin I measurements were done on admission of 570 consecutive patients with an acute PE. A predictive model was based on independent predictors of 30-day adverse events defined as death, secondary cardiogenic shock, or recurrent venous thromboembolism.Measurements and Main Results: At 30 days, 42 patients (7.4%; 95% confidence interval [CI], 5.5–9.8%) had adverse events. On multivariate analysis, altered mental state (odds ratio [OR] 6.8; 95% confidence interval [CI], 2.0–23.3), shock on admission (OR 2.8; 95% CI, 1.1–7.5), cancer (OR 2.9; 95% CI, 1.2–6.9), BNP (OR 1.3 for an increase of 250 ng/L; 95% CI, 1.1–1.6) and right to left ventricle diameter ratio (OR 1.2 for an increase of 0.1; 95% CI, 1.1–1.4) were associated with 30-days of adverse events. The predictive performance of the model was good (area under receiver operating characteristics curve 0.84 [95% CI, 0.78–0.90]), making it possible to develop a bedside prognostic score.Conclusions: BNP and echocardiography may be useful determinants of the short-term outcome for patients with PE, together with clinical findings. Patients with PE can be stratified according to the initial risk of adverse outcome, using a simple score based on clinical, echocardiographic, and biochemical variables.
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